



Volunteer Lake Assessment Program Individual Lake Reports

CHAPMAN POND, SULLIVAN, NH

MORPHOMETRIC DATA

Watershed Area (Ac.):	704	Max. Depth (m):	5.2	Flushing Rate (yr ⁻¹)	8.9	Year	Trophic class	KNOWN EXOTIC SPECIES
Surface Area (Ac.):	20	Mean Depth (m):	2.2	P Retention Coef:	0.48			
Shore Length (m):	1,300	Volume (m ³):	177,500	Elevation (ft):	1330			

TROPHIC CLASSIFICATION

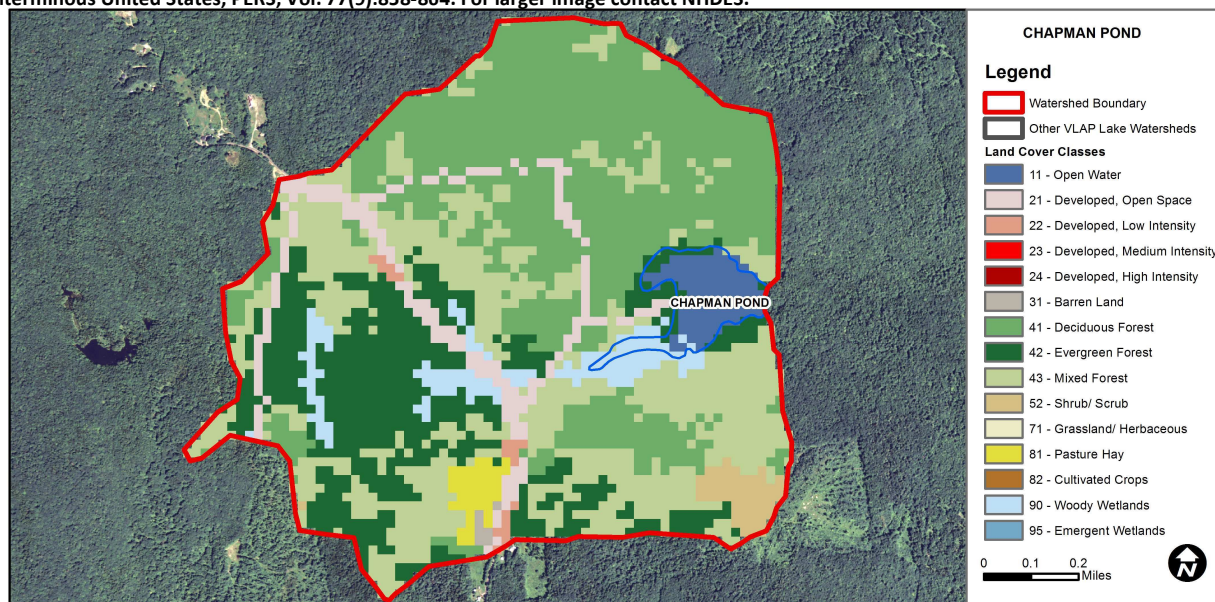
KNOWN EXOTIC SPECIES

The Waterbody Report Card tables are generated from the 2012 305(b) report on the status of N.H. waters, and are based on data collected from 2001-2011.

Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Cautionary	<5 samples and median is > threshold. More data needed.
	pH	Bad	>10%, with a minimum of 2, samples exceed criteria, with 1 or more by a large margin.
	D.O. (mg/L)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	D.O. (% sat)	Slightly Bad	>10% of samples exceed criteria by a small margin (minimum of 2 exceedances).
	Chlorophyll-a	Cautionary	<5 samples and median is < threshold. More data needed.
Primary Contact Recreation	E. coli	Good	Geometric means < criteria; however at least 1 exceedance of the single sample criteria occurred.
	Chlorophyll-a	Encouraging	< 10 samples and no exceedance of criteria. More data needed.

WATERSHED LAND USE SUMMARY

Fry, J., Xian, G., Jin, S., Dewitz, J., Homer, C., Yang, L., Barnes, C., Herold, N., and Wickham, J., 2011. Completion of the 2006 National Land Cover Database for the Conterminous United States, PERS, Vol. 77(9):858-864. For larger image contact NHDES.



Land Cover Category	% Cover	Land Cover Category	% Cover	Land Cover Category	% Cover
Open Water	2.9	Barren Land	0.23	Grassland/Herbaceous	0
Developed-Open Space	5.86	Deciduous Forest	34.99	Pasture Hay	1.29
Developed-Low Intensity	0.61	Evergreen Forest	19.52	Cultivated Crops	0
Developed-Medium Intensity	0	Mixed Forest	28.45	Woody Wetlands	4.29
Developed-High Intensity	0	Shrub-Scrub	1.71	Emergent Wetlands	0



VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

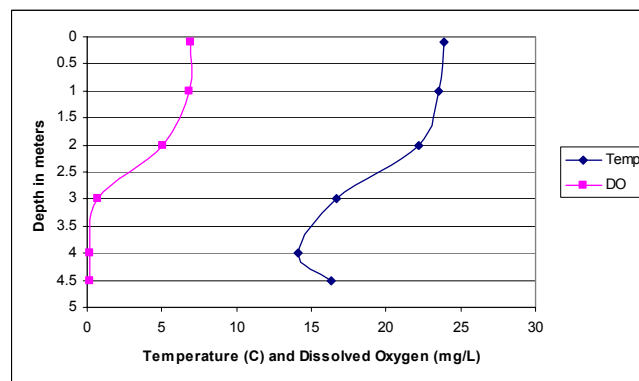
CHAPMAN POND, SULLIVAN, NH

2012 DATA SUMMARY

OBSERVATIONS AND RECOMMENDATIONS (Refer to Table 1 and Historical Deep Spot Data Graphic)

- 🔥 **CHLOROPHYLL-A:** The 2012 average chlorophyll levels were greater than the NH lake median; however levels have remained stable since monitoring began.
- 🔥 **CONDUCTIVITY/CHLORIDE:** Conductivity levels were average for most NH lakes.
- 🔥 **E. COLI:** E. coli levels were well below the state standards for public beaches and surface waters.
- 🔥 **TOTAL PHOSPHORUS:** Deep spot phosphorus levels were approximately equal to the NH lake median, and have remained relatively stable since monitoring began. Phosphorus levels in Wegman Inlet were slightly elevated
- 🔥 **TRANSPARENCY:** Average lake transparency has fluctuated between 2.0 and 2.5 meters since monitoring began.
- 🔥 **TURBIDITY:** Hypolimnetic (lower water layer) turbidity was slightly elevated. It is possible that bottom sediments were disturbed and contributed to the elevated turbidity.
- 🔥 **PH:** Pond pH is low due to natural conditions. However, this could potentially affect specific fish species and other aquatic life.
- 🔥 **RECOMMENDED ACTIONS:** Conduct additional monitoring during the summer months to better assess water quality trends and overall lake health.

Dissolved Oxygen & Temperature Profile



Station Name	Table 1. 2012 Average Water Quality Data for CHAPMAN POND								
	Alk.	Chlor-a	Cond.	E. Coli	Total P	Trans.		Turb.	pH
	mg/l	ug/l	uS/cm	#/100ml	ug/l	m		ntu	
						NVS	VS		
Deep Epilimnion	1.4	6.53	34.1		12	2.88	2.4	1.33	5.97
Deep Hypolimnion			40.2		15			2.02	5.36
Wegman Inlet			35.6	10	19			1.3	5.58

NH Median Values: Median values for specific parameters generated from historic lake monitoring data.

Alkalinity: 4.9 mg/L

Chlorophyll-a: 4.58 mg/m³

Conductivity: 40.0 uS/cm

Chloride: 4 mg/L

Total Phosphorus: 12 ug/L

Transparency: 3.2 m

pH: 6.6

NH Water Quality Standards: Numeric criteria for specific parameters. Results exceeding criteria are considered a water quality violation.

Chloride: < 230 mg/L (chronic)

E. coli: > 88 cts/100 mL – public beach

E. coli: > 406 cts/100 mL – surface waters

Turbidity: > 10 NTU above natural level

pH: 6.5-8.0 (unless naturally occurring)

HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Explanation
Chlorophyll-a	N/A	Additional data necessary to conduct trend analysis.
Transparency	N/A	Additional data necessary to conduct trend analysis.
Phosphorus (epilimnion)	N/A	Additional data necessary to conduct trend analysis.

This report was generated by the NH DES Volunteer Lake Assessment Program (VLAP). For more information contact:

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